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(19) **United States**(12) **Patent Application Publication**  
**PALANGIE et al.**(10) **Pub. No.: US 2019/0333278 A1**(43) **Pub. Date: Oct. 31, 2019**(54) **TANGIBILITY VISUALIZATION OF  
VIRTUAL OBJECTS WITHIN A  
COMPUTER-GENERATED REALITY  
ENVIRONMENT****G06T 19/20** (2006.01)**G06T 15/20** (2006.01)(52) **U.S. Cl.****CPC** ..... **G06T 19/006** (2013.01); **G06T 19/003**  
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**ABSTRACT**(21) Appl. No.: **16/375,595**(22) Filed: **Apr. 4, 2019****Related U.S. Application Data**(60) Provisional application No. 62/664,759, filed on Apr.  
30, 2018.**Publication Classification**(51) **Int. Cl.****G06T 19/00** (2006.01)**G06T 7/73** (2006.01)

The present disclosure relates to techniques for providing tangibility visualization of virtual objects within a computer-generated reality (CGR) environment, such as a CGR environment based on virtual reality and/or a CGR environment based on mixed reality. A visual feedback indicating tangibility is provided for a virtual object within a CGR environment that does not correspond to a real, tangible object in the real environment. A visual feedback indicating tangibility is not provided for a virtual representation of a real object within a CGR environment that corresponds to a real, tangible object in the real environment.

416

In accordance with detecting, using the one or more sensors, a second movement of the first real object from the second location to a third location in the environment:

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Present a corresponding movement of the representation of the first real object from the second location to the third location in the CGR environment.

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In accordance with a determination that the distance criteria is satisfied and the virtual object does not correspond to the second real object, remove a second portion of the displayed virtual object, the second portion different from the portion of the displayed virtual object that is removed.

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In accordance with a determination that a second distance criteria is satisfied and the virtual object does not correspond to the second real object, remove an additional portion of the displayed virtual object from the displayed virtual object with the portion removed, where the second distance criteria is satisfied when the third location is within a second threshold distance of the virtual object, the second threshold distance smaller than the threshold distance.

424

In accordance with a determination that the distance criteria is no longer satisfied, re-present the removed portion of the displayed virtual object.